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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/771,019	01/26/2001	Frank C. Hoppensteadt	9138-23	6361

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EXAMINER

HIRL, JOSEPH P

ART UNIT	PAPER NUMBER
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2121

DATE MAILED: 07/24/2003

4

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

09/771,019

Applicant(s)

HOPPENSTEADT ET AL.

Examiner

Joseph P. Hirl

Art Unit

2121

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1,9-11 and 18-20 is/are rejected.
- 7) ☒ Claim(s) 2-8 and 12-17 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☒ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 2.
- 4) ☐ Interview Summary (PTO-413) Paper No(s) \_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

### **DETAILED ACTION**

1. Claims 1-20 are pending in this application.
2. The claims and only the claims form the metes and bounds of the invention. The Examiner has full latitude to interpret each claim in the broadest reasonable sense. Examiner will reference prior art using terminology familiar to one of ordinary skill in the art. Such an approach is broad in concept and can be either explicit or implicit in meaning.

### ***Claim Objections***

3. Claims 2-8 and 12-17 objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim, any intervening claims and related requirements of this office action.

### ***Claim Rejections - 35 USC § 102***

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

5. Claims 1, 9-11 and 18-20 are rejected under 35 U.S.C. 102(e) as being anticipated by Ahissar (U.S. Patent 6,581,046 referred to as Ahissar).

**Claim 1**

Ahissar anticipates a weighting network having a plurality of output terminals, the weighting network having phase-based connection strengths (**Ahissar**, Abstract; Fig. 3A; col 24, lines 32-35); and a plurality of phase-locked loop circuits operably coupled with said weighting network (**Ahissar**, col 1, lines 13-38; Examiner's Note (EN): the phase-lock is driven by the feedback which is synonymous with weighting).

**Claim 9**

Ahissar anticipates the weighting elements comprise a phase shift circuit (**Ahissar**, col 1, lines 13-38; Examiner's Note (EN): the phase-lock (shift as necessary) is driven by the feedback which is synonymous with weighting of the implementing circuits).

**Claim 10**

Ahissar anticipates the weighting circuit further includes a plurality of initialization input terminals (Fig. 3A).

**Claim 11**

Ahissar anticipates a plurality of connectors, wherein each connector has a phase-encoded connection coefficient (**Ahissar**, Abstract; Fig. 3A; col 24, lines 32-35; EN: connection coefficient is synonymous with weights which is synonymous with feedback) ; and a plurality of oscillators operably coupled with said plurality of connectors (Fig. 3A).

**Claim 18**

Ahissar anticipates a phase deviation between a learned pattern and the incoming pattern to create an output signal indicative of the learned pattern (**Ahissar**, col 1, lines 9-12).

**Claim 19**

Ahissar anticipates wherein using the phase deviation includes encoding connection coefficients of the neural network computer in accordance with phase representations of the learned pattern (**Ahissar**, col 1, lines 9-12; col 6, lines 45-47).

**Claim 20**

Ahissar anticipates a neural network computer comprising encoding connection coefficients of the neural network computer in accordance with phase relationships of a pattern to be learned (**Ahissar**, col 1, lines 9-12: EN: the learning is represented by how to decode and then convert).

***Conclusion***

6. Claims 2-8 and 12-17 are objected to. Claims 1, 9-11, 18-20 are rejected.

***Correspondence Information***

Any inquiry concerning this information or related to the subject disclosure should be directed to the Examiner, Joseph P. Hirl, whose telephone number is (703) 305-1668. The Examiner can be reached on Monday – Thursday from 6:00 a.m. to 4:30 p.m.

If attempts to reach the Examiner by telephone are unsuccessful, the Examiner's supervisor, Anil Khatri can be reached at (703) 305-0282.

Any response to this office action should be mailed to:

Commissioner of Patents and Trademarks,

Washington, D. C. 20231;

or faxed to:

(703) 746-7239 (for formal communications intended for entry);

or faxed to:

(703) 746-7290 (for informal or draft communications with notation of "Proposed" or "Draft" for the desk of the Examiner).

Hand-delivered responses should be brought to:

Receptionist, Crystal Park II

2121 Crystal Drive,

Arlington, Virginia.

Joseph P. Hirl



July 17, 2003



**ANIL KHATRI**  
**PRIMARY EXAMINER**